

Abstract

A fuel injector (1), especially an injector for fuel injection systems of internal combustion engines, includes a piezoelectric or magnetostrictive actuator (4), which, via an hydraulic coupler (13), actuates a valve-closure member (18) formed on a valve needle (17), the valve-closure member (18) cooperating with a valve-seat surface (20) to form a sealing seat. The hydraulic coupler (13) has a master piston (12) and a slave piston (14). A coupler gap (15) formed between the master piston (12) and the slave piston (14) is dimensioned such that it is closed in the cold state of the fuel injector (1) and opens by a temperature-related linear deformation of the actuator (4) as the temperature of the fuel injector (1) increases.

(Figure 1)